Invitation for Public Comment on the List of Candidates for the Environmental Protection Agency Science Advisory Board 2019 – 2021 Scientific and Technological Awards Committee

April 9, 2019

The U.S. Environmental Protection Agency Science Advisory Board (SAB) Staff Office announced in a Federal Register Notice on December 10, 2018 (83 FR 63502 - 63503) that it was inviting nominations of experts to serve on the 2019 - 2021 SAB Scientific and Technological Awards (STAA) Committee. The SAB Staff Office sought nominations of experts with demonstrated expertise in one or more of the following disciplines: air pollution exposure; chemical engineering; civil and environmental engineering; decision science; ecology; environmental economics; groundwater and surface water contaminant fate and transport; human health effects and risk assessment; monitoring and measurement methods for air and water; risk management; transport and fate of contaminants; water quality; and water and wastewater treatment processes. The SAB Staff Office stated that it was interested in scientists and engineers with expertise described above who had knowledge and experience in air quality; aquatic and ecological toxicology; chemical safety; community environmental health; dosimetry and inhalation toxicology; drinking water; ecological modeling; ecological risk assessment; ecosystem restoration; ecosystem services; energy and the environment; epidemiology; green chemistry; homeland security; human health dosimetry; mechanisms of toxicity and carcinogenicity; metabolism; statistics; sustainability; toxicokinetics; toxicology; waste and waste management; and water re-use.

The SAB Staff Office Director will make the final decision about who will serve on the Committee based on all relevant information. This information includes a review of the confidential disclosure form (EPA Form 3110-48), information independently gathered by staff, and public comments. For the EPA SAB Staff Office, a balanced review committee includes candidates who possess the necessary domains of knowledge, the relevant scientific perspectives (which, among other factors, can be influenced by work history and affiliation), and the collective breadth of experience to adequately address the charge. Specific criteria to be used in evaluating a candidate include: (a) scientific and/or technical expertise, knowledge, and experience (primary factors); (b) availability and willingness to serve; (c) absence of financial conflicts of interest; (d) absence of an appearance of a loss of impartiality; (e) skills working in committees, subcommittees and advisory panels; and, (f) for the committee as a whole, diversity of expertise and scientific points of view. The SAB Staff Office has identified the following list of 19 candidates for this Committee based on their relevant expertise and willingness to serve.

We hereby invite public comments on the attached List of Candidates that the SAB Staff Office should consider in the formation of this Committee. Comments should be submitted to the attention of Dr. Diana Wong, Designated Federal Officer, no later than April 30, 2019. E-mailing comments (Wong.Diana-M@epa.gov) is the preferred mode of receipt. Please be advised that comments received are subject to release under the Freedom of Information Act.

Candidates for the 2019 – 2021 Scientific and Technological Awards (STAA) Committee

Aelion, C. Marjorie

University of Massachusetts

Dr. C. Marjorie Aelion is the Professor of Environmental Health Sciences and Dean of the School of Public Health and Health Sciences at the University of Massachusetts Amherst. Dr. Aelion holds a B.S. in Environmental Sciences from the University of Massachusetts Amherst, an S.M.C.E. in Civil Engineering from Massachusetts Institute of Technology, and a Ph.D. in Environmental Sciences and Engineering from the University of North Carolina, Chapel Hill. The emphasis of her research and teaching is on remedial technologies and environmental contaminants, and associations between environmental contaminants and health outcomes. Dr. Aelion's professional interests include: environmental health; civil and environmental engineering; fate and transport of contaminants in surface and subsurface waters; soil and sediment treatment; monitoring and measurement methods for water; hazardous waste site remediation; and human health effects and risk assessment. She has published numerous articles in leading environmental engineering, environmental science, and environmental health journals; book chapters; and two books (Environmental Isotopes in Biodegradation and Bioremediation, Taylor and Francis, 2010; Innovative Methods in Support of Bioremediation, Battelle Press, 2001). Dr. Aelion's research has been supported by grants and contracts with both government agencies and private foundations, with core research support primarily from the federal government (National Institutes of Health, National Oceanic and Atmospheric Administration, National Science Foundation, and U.S. Department of Energy) with additional grant support from state governments and foundations. She has not received external funding in the past two years. Dr. Aelion received the National Science Foundation Presidential Faculty Fellow Award in Engineering, the Harriet Hylton Barr Distinguished Alumni Award for Commitment and Service to Public Health, and three Fulbright awards, one to France, one to the Netherlands and a Global Scholar Award to Australia, Greece and Mexico. Dr. Aelion currently serves as a member of the Board of Directors for the Association of Schools and Programs of Public Health and as its secretary/treasurer, and serves on the Board of the Massachusetts Biologics Laboratories, Inc. She has served as Managing Editor for Biodegradation and is currently serving on the editorial boards for Bioremediation Journal, Biodegradation, and the International Journal of Oceans & Oceanography.

Anderson, Henry

University of Wisconsin -Madison

Dr. Henry A. Anderson, M.D. holds adjunct professorships at the University of Wisconsin-Madison, School of Medicine and Public Health, Department of Population Health Sciences, and the University of Wisconsin Institute for Environmental Studies, Center for Human Studies. In July 2016, he retired from his positions as Wisconsin State Environmental and Occupational Disease Epidemiologist, and Chief Medical Officer in the Wisconsin Division of Public Health, Department of Health Services which he held since 1980. His 35 years of research and programmatic expertise and experience includes public health; preventive, environmental, and occupational medicine; occupational and environmental human health and exposure epidemiology; human health risk assessment; regulatory risk assessment and risk communication. Active research interests include: disease and exposure surveillance systems, cancer and chronic disease epidemiology, reproductive and endocrine health hazards, drinking water contaminants, pesticides and dietary risk assessment including sport fish consumption advisory communication. Dr. Anderson served on the U.S. EPA Science Advisory Board (SAB) Chemical Assessment Advisory Committee from 2013 – 9/2018 and previously served on the EPA National Advisory Committee for Acute Exposure Guideline Levels for Hazardous Substances. He was chair of the Environmental Health Committee of the U.S. EPA Science Advisory Board, served on the U.S. EPA SAB Executive Committee and is past Chair of the Board of Scientific Councilors for the National Institute of Occupational Safety and Health. He has served on five National Academies of Science Committees including "Toxicity Testing for Assessment of Environmental Agents." He serves on the Presidential Advisory Board on Radiation Worker Compensation. He is associate editor of the American Journal of Industrial Medicine. Dr. Anderson received his M.D. degree in 1972 from the University of Wisconsin-Madison. He was certified in 1977 by the American Board of Preventive Medicine with a sub-specialty in occupational and environmental medicine and in 1983 became a fellow of the American College of Epidemiology. Dr. Anderson was a state government employee until 7/2016 and his research has been supported by the State of Wisconsin and grants from U.S. government agencies, primarily U.S. Department of Health and Human Services/Centers for Disease Control and Prevention and the U.S. Environmental Protection Agency. All EPA and other federal government research support ended with his retirement in 7/2016. Dr. Anderson currently serves on the Presidential Advisory Board on Radiation Worker Compensation (2001-2006 and 2009-current), National Academies of Science Roundtable on Environmental Health Sciences, Research, and Medicine (2011-current) and 2013-2018 on the United States Environmental Protection Agency Science Advisory Board, Chemical Assessment Advisory Committee on which he reviewed Ammonia (2014-2015), Ethylene Oxide (2014-2015), and draft Chloroform, nitrate/nitrite, Ethylbenzene IAPs (2016-2017). Beginning in 1997 he served on various U.S. EPA Science Advisory Board committees including the Executive Committee (1997-2003) and was chair of the Integrated Human Exposures Subcommittee (1997-2001) and then chair of the Environmental Health Committee (2001-2003). He served on the U.S. EPA's National Advisory Committee for Acute Exposure Guideline Levels for Hazardous Substances (2006-2012), the U.S. EPA Children's' Health Protection Advisory Council (2004–2009) and the U.S. EPA Endocrine Disruptor Screening and Testing Committee (1997–1999). He was also chair of the Board of Scientific Councilors for the National Institute of Occupational Safety and Health (2004-2006). He served on the Armed Forces Epidemiology Board (1996-2000).

Bejarano, Adriana C.

Shell Health - Americas

Dr. Adriana C. Bejarano is a senior ecotoxicologist with Shell Health – Americas. She was previously an aquatic toxicologist affiliated with Research Planning Inc. (RPI), and the University of South Carolina where she was an Adjunct Professor at the Department of Environmental Health Sciences. Dr. Bejarano is an environmental scientist with broad experience in computational toxicology, environmental modeling, environmental statistics, and applied aquatic eco-toxicology. She has studied the toxicological effects of organic pollutants, including oil related products, on marine and estuarine organisms at multiple levels of biological organization. She has led and has been involved in national and international projects enabling science-based decisions in support of environmental assessments. Through RPI, Dr. Bejarano has been part of the Scientific Support Team to the U.S. Coast Guard provided by the National Oceanic and Atmospheric Administration's Emergency Response Division (NOAA-ERD) for oil and chemical spills. She has provided on-site and off-site emergency consultation and scientific support related to the potential environmental consequences associated with oil and hazardous chemical incidents, including risk characterization and potential toxicological effects to aquatic receptors, and quantitative reports and analyses of potential levels of concern. Through the University of South Carolina, she has conducted research on the environmental impacts of illicit crop cultivation in her native Colombia, and has continued to develop bioenergetic models for marine mammals. Dr. Bejarano holds a B.A. in Marine Biology from Universidad del Valle, Colombia, and a M.S. in Marine Science and a Ph.D. in Aquatic Toxicology from the University of South Carolina. During the past two years, she received research funding through RPI from Pegasus Technical Services, Inc., TetraTech, Clean Caribbean and Americas, and NOAA-ERD.

Bui, Linda

Brandeis University

Dr. Linda Bui received her Ph.D.in Economics from Massachusetts Institute of Technology (MIT) and is currently an Associate Professor of Economics at Brandeis University. She has taught at Boston University, the University of Michigan, MIT, and the Sloan School of Management. Professor Bui has done work in the area of environmental regulation and its effects on firm-level behavior, strategic environmental behavior between autonomous countries in the context of trans-boundary pollution, and the effectiveness of public disclosure as a regulatory instrument for the environment. Dr. Bui's current research focuses on health outcomes and the environment, and issues of inequality and the environment. She currently has funding through Brandeis University's Theodore and Jane Norman grant to study the relationship between poverty, health, and the environment.

Chen, Celia

Dartmouth College

Dr. Celia Chen is a Research Professor in the Department of Biological Sciences at Dartmouth College and the Director of the Dartmouth Toxic Metal Superfund Research Program. For the last 23 years, she has studied the fate and effects of metal contaminants in freshwater and estuarine ecosystems particularly the bioaccumulation and trophic transfer of mercury. She has also investigated the effects of multiple stressors on aquatic organisms, including the impacts of changes related to climate on aquatic food webs. Dr. Chen received a B.A. in Biology at Dartmouth College, M.S. in Biological Oceanography at the University of Rhode Island, and a Ph.D. in Ecology from Dartmouth College. In the Dartmouth Toxic Metals Program, she is also the Core Leader of the Research Translation Core working to communicate scientific information to improve human health and the environment. She has chaired regional and international workshops and meetings on mercury in the environment. She represents Dartmouth College on the United Nations Environment Programme Fate and Transport Partnership and participated in the conferences of the Minamata Convention. She is currently a Review Editor for the journal, Ecohealth, and has been a guest editor of special issues in Environmental Research, Environmental Health Perspectives, Estuaries and Coasts, Ecohealth, Science of the Total Environment, and Ambio. She has published over 70 peer-reviewed papers. She served on the U.S. EPA Science Advisory Board Mercury Panel, the Ecological Processes and Effects Committee, and the Lake Erie Phosphorus Objectives Review Panel. She also has served on the Boards of the North Atlantic Chapter of the Society of Environmental Toxicology and Chemistry, Gelfond Fund at Stony Brook University, and the Scientific Advisory Committee of the Lake Sunapee Protection Association. Her research has recently been supported by the NIEHS, the CDC, the USDA, the USEPA, and the Sea Grant Program of NOAA.

DeGeorge, Joseph J.

Independent Consultant

Dr. Joseph J. DeGeorge Co-founded Bianca Holdings, LLC and serves as a Principal Partner responsible for non-clinical pharmaceutical development consulting. Dr. DeGeorge was Vice President of Global Safety Assessment for Merck Research Laboratories from 2004-2017. From September of 2010, he served as Global Head of Safety Assessment and Laboratory Animal Resources for Merck Research Laboratories with global responsibility for non-clinical safety testing and evaluation in support of pharmaceutical discovery and development, and from November of 2016 as Vice President, Preclinical Development Drug Safety. He has served on or chaired committees on drug discovery, drug candidate selection, early and late development, and development and post marketing drug safety. In addition to his position with Merck, he also served as the PhRMA Lead for ICH Safety Topics (2004-2018) and has participated in development of numerous ICH Guidances as PhRMA's representative on ICH Safety and Multidisciplinary Expert Working Groups. He is a Council member for Institute of Laboratory Animal Research (ILAR) at the National Academy of Sciences and has served on the Environmental Protection Agency Science Advisory Boards, most recently as a toxicology expert on Hydraulic Fracturing Water Quality Research Advisory Panel. He served as Vice President of Preclinical Safety Evaluation at Novartis Pharmaceuticals (2002-2004) and as the Global Chair for the Research and Development Safety Assessment Committee. Prior to Novartis, he was employed at the Food and Drug Administration (FDA) (1989-2002), where he held the position of Associate Director for Pharmacology and Toxicology in the Center for Drug Evaluation and Research (CDER) (1996-2002) with responsibility for pharmacology and toxicology policy development and implementation. During his tenure at FDA he served on numerous policy and technical committees: Chair for CDER's Carcinogenicity Assessment Committee, CDER's Pharmacology and Toxicology Coordination Committee, the preclinical lead for the FDA Genomics and Proteomics Task Force, as a member of the International Life Sciences Institute (ILSI) Risk Science Institute Thresholds Assessment Committee, the ILSI-Health and Environmental Sciences (HESI) Alternatives to Carcinogenicity Testing Committee and the ILSI-HESI Emerging Issues Committee, as CDER's technical representative to the Presidential Commission on Risk Assessment and CDER's lead to the NIEHS-National Toxicology Program Academia, Industry, and Government Partnership for Evaluation and Validation of Transgenic Models for Carcinogenicity Testing. He also was CDER's ICH Safety Coordinator and lead for numerous ICH Safety Expert Working Groups for Safety, Multidisciplinary and Quality topics. Dr. DeGeorge was a Senior Staff Fellow at the National Institutes of Health, National Institute on Aging, Laboratory of Neurosciences, where he worked on development of *in vivo* functional and structural brain imaging probe. He received postdoctoral training as a Fellow at the University of North Carolina, Chapel Hill, NC with a joint appointment at the Burroughs Wellcome Research Institute, Research Triangle Park, NC, where he focused on neural cell signaling and second messenger systems. Dr. DeGeorge received his Ph.D. in Pharmacology from the State University of New York/Upstate Medical Center, and his B.S. in Biology at the State University of New York, Albany. Dr. DeGeorge has not received research funding during the past two years.

Fan, Zhihua (Tina)

New Jersey Department of Health

Dr. Zhi-Hua (Tina) Fan is the Director of the Environmental and Chemical Laboratory Services (ECLS), Public Health and Environmental Laboratories (PHEL), New Jersey Department of Health (NJDOH). She oversees all programs conducted by four laboratories at ECLS. The major programs include the Centers for Disease Control (CDC) funded Laboratory Response Network- Chemical Threats and the New Jersey State Biomonitoring Program, Food Safety and Inspection Service (FSIS) funded Food Emergency Response Network Program, and the state funded environmental testing program for inorganic analytes, organic compounds, and radiological analytes in water and soil. Prior to joining the NJDOH in May 2014, Dr. Fan was an Associate Professor in the Exposure Science Division of the Department of Environmental and Occupational Medicine at Robert Wood Johnson Medical School, Rutgers University. She has more than 20 years of experience in studying personal and community exposure to environmental pollutants through inhalation, ingestion and contact. Her research includes assessment of exposure to air pollutants in social economically disadvantaged communities, identification of the sources of exposures and the factors that may affect those exposures, and investigation of the underline mechanisms of cardiopulmonary health effects associated with exposure to air pollution in the indoor and outdoor environment. Dr. Fan also has extensive experience in sampling and analytical methods development for measuring and assessing various environmental pollutants in both environmental and biological samples. Dr. Fan is the PI and co-PI for more than 20 research grants, has published more than 40 scientific research articles, and 5 book chapters/invited articles, and has had more than 50 scientific conference presentations. Her research in the past two years is primarily funded by the CDC, FSIS, and N.J. Department of Environmental Protection. Dr. Fan serves on multiple state and national environmental and public health committees including: the U.S. EPA Science Advisory Board, Scientific and Technological Achievement Awards Committee, Chair of the Testing Subcommittee, New Jersey Drinking Water Quality Institute, Association of Public Health Laboratories (APHL)-National Biomonitoring Network Steering Committee, Treasurer of International Society of Exposure Science (ISES), Editorial Review Board for Journal of Exposure Science and Environmental Epidemiology. Previously she served as Internal Advisory Board member for the National Institute of Environmental Health Sciences (NIEHS) Excellence Center at Rutgers University, the Committee of Air Sampling Instruments of the American Commerce Government Industrial Hygiene (ACGIH). Dr. Fan received her B.S. and M.S. in Environmental Chemistry from Peking University, and received her Ph.D. Degree in Atmospheric Chemistry from the Department of Environmental Sciences and Engineering School of Public Health at the University of North Carolina - Chapel Hill.

Gerberick, G. Frank

GF3 Consultancy, LLC

Dr. G. Frank Gerberick is an independent consultant and owner of GF3 Consultancy, LLC. He was employed at the Procter & Gamble Company from 1986 - 2018. Prior to joining P&G, he was a postdoctoral fellow at The Johns Hopkins School of Medicine working in the field of pulmonary immunology. Dr. Gerberick holds a B.S. from Edinboro State University of Pennsylvania and an M.S. from Duquesne University, both in Biology, and a Ph.D. Medical Microbiology from West Virginia University. While working at P&G, Dr. Gerberick has focused his career working in the field of dermatotoxicology. In 2004, He was appointed to the Procter & Gamble Victor Mills Society which is the highest technical honor for P&G scientists. Dr. Gerberick's primary research focus has been in the field of skin allergy, although he has also been active in the field of phototoxicology. He has over 175 publications and has co-authored a book entitled Toxicology of Contact Dermatitis. His laboratory's research is focused primarily on elucidating the chemical, cellular and molecular mechanisms underlying skin allergy in hope of developing in vitro test methods for skin sensitization testing. Recently, Dr. Gerberick has begun research efforts in the area of respiratory allergy and is interested in understanding the role of the microbiome in human health. In the past, his laboratory was actively involved in the development and validation of the LLNA. For his effort, he has been a co-recipient of two prestigious international awards: the SmithKline Beecham Laboratory Animal Welfare Prize and the Society of Toxicology's Animal Welfare Award. He was also awarded the William and Elenor Cave Award and Lush Black Box Prize for advancing skin sensitization alternatives. The Direct Peptide Reactivity Assay developed in Dr. Gerberick's laboratory has been successfully evaluated by the European Union Reference Laboratory for Alternatives to Animal Testing and adopted as OECD test guideline. Finally, he was selected as the 2017 Alexander A. Fisher Lecturer which is the highest honor given by the American Contact Dermatitis Society. The Procter & Gamble Company supported Dr. Gerberick's research through February 2018. Dr. Gerberick has no external research grants.

Grippo, Richard S.

Arkansas State University

Dr. Richard S. Grippo is an Emeritus Professor of Environmental Biology at Arkansas State University (A-State). He has received over $2,000,000 in competitive research funding in the areas of biomonitoring, bioassessment and ecological risk assessment. Dr. Grippo's research funding over the past two years has been supported by grants from and contracts with both government agencies (non-EPA) and private companies, with core research support primarily being from the federal government (National Science Foundation) and contractual sources of funding from a private consulting firm (EnSafe, Inc. Memphis, TN). His primary research focus is on the environmental effects of fossil fuel extraction on aquatic and marine organisms. Recent funded research includes evaluating stream bank restoration on cattle ranches (U.S. Environmental Protection Agency), efficacy of Best Management Practices on adjacent streams following clear-cut silviculture (U.S. Environmental Protection Agency and Arkansas Forestry Commission), environmental impact of an aquaculture therapeutant (U.S. Department of Agriculture), factors affecting migratory bird collisions with communication towers (U.S. Fish and Wildlife Service, and AR Game and Fish Commission), the effects of oil spill dispersants on estuarine fish physiology (Arkansas State University), the effect of the BP oil spill on food resources of shorebirds, especially the Black Skimmer (National Science Foundation), and Planning Grant for the Harp Environmental Field Station (National Science Foundation). Dr. Grippo also recently received funding from Arkansas State University to evaluate whether mangroves serves as nurseries for coral reef fish in the Caribbean, specifically the U.S. Virgin Islands. In 2006, he was the recipient of the Arkansas State university Environmental Sciences Faculty Research Award. Dr. Grippo has performed environmental assessments and reviews as a consultant on numerous industrial projects, including Mississippi River harbor enlargements in Missouri; environmental assessments of stream widening, irrigation lake construction (Grand Prairie Project), and a new I-40 interchange construction, in Arkansas. Most recently he is consulting on the environmental impact assessment of the proposed Southern Gateway project (construction of a third Mississippi River bridge at Memphis, Tennessee). He has taught 11 lecture and laboratory/field courses including Case Studies in Ecosystem Management, Environmental Systems Analysis (computer modeling), Environmental Biology, Legal Aspects of Environmental Management, Field Experiences in Marine Systems (in Belize, Central America), Environmental Toxicology: Mechanisms and Impacts, Pharmacology, Marine Biology, Marine Mammals, and Biology of Sex. In 2014, he was the recipient of the Arkansas State University Chancellor's Award for Excellence in Teaching. He earned a B.S. in Tropical Marine Biology and an M.S. in Marine Ecology, both from Fairleigh Dickinson University at Madison, New Jersey. After receiving his M.S., he worked for five years as a research technician in the University of North Carolina - Chapel Hill School of Medicine, Department of Physiology, Renal Physiology Laboratory on the effects of internal and external factors on the genesis of hypertension and kidney disease. He earned a Ph.D. in Ecology with a Minor in Statistics from The Pennsylvania State University, where he studied the physiological effects of acid mine drainage and acid rain on aquatic organisms. While a graduate student he supplied scientific support to the class action litigation associated with the Exxon Valdez oil spill at field sites in Prince William Sound, lower Cook Inlet, and Kodiak Island, Alaska. He was awarded the Homeyer Graduate Fellowship Award for Outstanding Senior Graduate Student at Penn State in 1991. He has served on the Arkansas Governor's Task Force on In-stream Gravel Mining and chaired the committee that developed the successful proposal for the first Ph.D. program at Arkansas State University, in Environmental Science. He has served on the Meetings Committee and three Meeting Organizational Committees for the Society of Environmental Toxicology and Chemistry. He served as the chairman of the Environmental Committee of the Arkansas Chapter of the American Fisheries Society. He is currently president of the Mid-South Chapter of Society of Environmental Toxicology and Chemistry, and on the National Ecological Observatory Network (NEON) – Domain Science and Education Coordination Committee. He is co-director of the George L. Harp Environmental Field Station on the Buffalo National River, Arkansas; and the Bearitage Biological Field Station, Cherry Valley, Arkansas.

Jayjock, Michael

Jayjock Associates LLC

Dr. Michael Jayjock is an independent consultant who retired as a Senior Research Fellow from the Rohm and Haas Company where he worked for 35 years. During his employment at Rohm and Haas his responsibilities included development and management of all aspects of exposure assessment and mathematical modeling projects in the service of product safety. He developed interests and expertise in modeling the nature of indoor pollution by experimentally and theoretically characterizing sources and loss mechanisms. Dr. Jayjock has been an active participant on the Exposure Strategies and Risk Assessment Committees of the American Industrial Hygiene Association; the 2014 U.S. Department of Energy (DOE) Hanford Tank Vapor Assessment Team; the 2013 U.S. Environmental Protection Agency (EPA) peer review panel for the Draft Risk Assessment for Trichloroethylene (TCE)/Degreaser Arts/Crafts Uses; the 2018 U.S. Environmental Protection Agency (EPA) peer review panel for the Draft Exposure and Use Assessment for Five PBT Chemicals; the 2016 U.S. Environmental Protection Agency (EPA) peer review panel for Draft Guidelines for Human Exposure Assessment; the 2011 U.S. Environmental Protection Agency (EPA) Science Advisory Panel on Lead Exposure; the 2008 U.S. Environmental Protection Agency (EPA) Peer Consultation Panel for Perfluorooctanoic Acid (PFOA) Site-Related Environmental Assessment Program; the 2005 U.S. Environmental Protection Agency (EPA) Board of Scientific Councilors Peer Review Panel for the Office of Research and Development Science Program; the 2002 U.S. Environmental Protection Agency (EPA) Human Health Research Strategy Panel; member of or consultant to the 1998-2003 U.S. Environmental Protection Agency (EPA) Science Advisory Board – Integrated Human Exposure Committee (IHEC). He is not currently a recipient of research grants from the Environmental Protection Agency, other federal agencies, or the private sector. His sources of funding in the last two years have come from participation in EPA Peer Reviews, consulting with government regulatory agencies, trade groups and chemical companies and offering advice to litigating attorneys.

Morandi, Maria

Independent Consultant

Dr. Maria Morandi received a B.S. degree in Chemistry from the City College of New York, and M.S. and Ph.D. degrees in Environmental Health Sciences from the Norton Nelson Institute of Environmental Medicine at New York University. She was certified in the comprehensive practice of industrial hygiene by the American Board of Industrial Hygiene until she retired from practice in 2017. She was a Research Professor and the Director of the Inhalation and Pulmonary Physiology Core at the Center for Environmental Health Sciences in the Department of Biomedical and Pharmaceutical Sciences at the University of Montana in Missoula, Montana, until her retirement from academia in 2012. Prior to that, she was in the faculty of the School of Public Health at the University of Texas in Houston. Dr. Morandi's research focuses on the assessment of exposures to airborne gases and particles and related health effects. Specific areas of research include developing methods for assessing exposures to wood smoke and resulting respiratory effects in humans and in animal models; determining the physiochemical characteristics of engineered nanoparticles that might explain their bioactivity and potential risk to public health; developing passive sampling and analysis methods for monitoring personal exposures to volatile organic compounds, and the characterization and source apportionment of airborne particulate matter. Some of these methods have been applied extensively for the assessment of adult and children's exposures to volatile organic compounds in large population studies, including residents of disadvantaged communities, and a representative subset of participants in the National Health and Nutrition Examination Survey (NHANES). Dr Morandi has served on multiple national-level committees including EPA's Chemical Assessment Advisory Committee, the Clean Air Scientific Advisory Committee for the Ozone and the Lead Reviews, the Integrated Human Exposure/Health Effects Committee and the Research Strategies Advisory Committee of the Science Advisory Board; the Committee on Acute Exposure Guideline Levels of the Board on Environmental Studies and Toxicology of the National Research Council, National Academies of Science; the Mine Health Research Advisory Committee of the Mining Safety and Health Administration, the Board of Scientific Counselors of the National Toxicology Program of the National Institute of Environmental Health Sciences, and the Board of Scientific Counselors of the Agency for Toxic Substances and Disease Registry. She has participated in multiple training and research review panels, including EPA's STAR Fellowships in Public Health, National Institute for Occupational Safety and Health (NIOSH) Education and Research Centers, and NIOSH's Occupational Safety and Health Study Section. Dr. Morandi has not received research funding during the past two years.

Pagilla, Krishna R.

University of Nevada, Reno

Dr. Krishna Pagilla is a Professor and Program Director of Environmental Engineering in the Civil and Environmental Engineering Department at the University of Nevada, Reno. He is also the Director of the Nevada Water Innovation Institute. Dr. Pagilla has B.E., M.S., and Ph.D. degrees in Civil/Environmental Engineering from the Osmania University (India), the University of Oklahoma (Norman, OK), and the University of California (Berkeley, CA), respectively. Dr. Pagilla is a Registered Professional Engineer (PE) in Illinois and California, and Board Certified Environmental Engineer of the American Academy of Environmental Engineers and Scientists (AAEES). He is a member of Water Environment Federation (WEF), International Water Association (IWA), Association of Environmental Engineering and Science Professors (AEESP), American Society of Civil Engineers (ASCE), Engineers without Borders USA (EWB-USA), AAEES, Central States Water Environment Association (CSWEA), and Illinois Water Environment Association (IWEA). Dr. Pagilla's academic focus is on water quality, water resource recovery, and environmental biotechnology. The primary focus of his current research is on water reclamation; water-economy nexus framework; biological strategies to reduce oxygen requirements for aerobic processes; water, energy, and nutrient recovery from wastewater; and enhanced energy production through anaerobic digestion of sludge and waste feedstocks. He researched nutrient pollution control and recovery, gaseous emissions from wastewater treatment processes, sludge treatment processes in the past. His current research since the past 2 years is funded by the U..S Department of Agriculture, Washoe County, U.S. Bureau of Reclamation (subcontract from Washoe County), Western Regional Water Commission, City of Reno, City of Sparks, Truckee Meadows Water Authority, and Nevada Department of Transportation. Dr. Pagilla has been a consultant for various public utilities and private companies on wide range of environmental issues. Dr. Pagilla was the President of IWEA (2012-13), is the Chair of the USA National Committee of IWA, and was a committee chair of WEF. He served as an Associate Editor of Water Environment Research and Water Science and Technology. Dr. Pagilla received the Thomas R. Camp Applied Research Award (2013) and Gordon Maskew Fair Distinguished Engineering Educator Award (2013) from WEF. He received Harrison Prescott Eddy Medal for Outstanding Applied Research on Wastewater Principles and Processes (2011) from WEF and the Bill Boyle Outstanding Educator Award (2012) from the CSWEA. Dr. Pagilla is a Fellow of both WEF and IWA.

Parkerton, Thomas F.

ExxonMobil Biomedical Science

Dr. Thomas Parkerton joined ExxonMobil Biomedical Sciences, Inc. (EMBSI) as an Ecotoxicologist in 1992. He holds a B.S. in Environmental Science with an emphasis in Environmental Chemistry from Rutgers University and M.S. degrees in Aquatic Biology/Toxicology and Environmental Engineering from North Texas State University and Manhattan College, respectively. He received a Ph.D. in Environmental Science/Exposure Assessment from Rutgers University. Dr. Parkerton's area of expertise is in the development and application of computer models to predict the physio-chemical fate, bioaccumulation, trophic transfer and toxicological effects of chemicals entering the environment. Prior to joining EMBSI, Dr. Parkerton had gained experience in the development of scientifically defensible effluent, water and sediment quality criteria to protect aquatic life, wildlife and human health. Dr. Parkerton has coordinated numerous laboratory-based research programs to support environmental hazard classification and risk assessment of Exxon Mobil products. Other responsibilities have included performing multi-media exposure and environmental risk assessments in support of existing or new regulations. Dr. Parkerton relocated to Brussels in 1998 and served as the European ecotoxicology advisor for four years. In this role, Dr. Parkerton provided technical assistance to Exxon Mobil business units, industry associations and European regulatory agencies on environmental science issues relevant to both products and facility operations. In 2004, Dr. Parkerton became head of the EMBSI environmental sciences section that is headquartered in Annandale, New Jersey. In this position, Dr. Parkerton managed a group of approximately 20 consultants and laboratory staff. Over the next few years, Dr. Parkerton also led industry efforts to develop innovative methods, data and models to comply with the European REACH regulation. In 2011, Dr. Parkerton relocated to Houston Texas to assume a new position as senior environmental technical advisor. In this role, Dr. Parkerton is coordinating EMBSI technical support to its Houston-based clients and is providing expertise in helping EM address a variety of environmental issues. Dr. Parkerton has received no external grants from either government agencies, private companies, or foundations.

Pinkerton, Kent

University of California, Davis

Dr. Kent E. Pinkerton is Professor of Pediatrics in the School of Medicine and Professor of Anatomy, Physiology and Cell Biology in the School of Veterinary Medicine at the University of California, Davis (UCD). He serves as Director in the Center for Health and the Environment, Director of the Western Center for Agricultural Health and Safety, and Deputy Director of the NIEHS Environmental Health Science Core Center at the University of California, Davis. Dr. Pinkerton received his B.S. in Microbiology with a minor in Chemistry from Brigham Young University; and his M.S. and Ph.D. in Pathology from Duke University. Dr. Pinkerton began his faculty appointment at UC Davis in 1986. The research of Dr. Pinkerton has focused on the respiratory, cardiovascular and neural systems and health. General themes addressed: (1) mechanisms of particulate toxicity, (2) effects of oxidant gases on lung injury and repair, (3) effects of environmental pollutants on lung development and immune responses during perinatal life, (4) tobacco smoke-induced lung inflammation and disease, (5) chemotherapeutic agents and inhibitors of inflammation in an animal model of allergic airway hyper-reactivity and (5) health effects of engineered nanomaterials. He has published over 240 articles in peer-reviewed, scientific journals, texts, and encyclopedias on those subjects. Dr. Pinkerton has served on numerous advisory committees and other professional societies. He currently serves as the Director for Health and the Environment at UC Davis since 2001, overseeing an annual research budget of more than $5 million with 18 faculty members and 100 staff and students from the Schools of Medicine, Veterinary Medicine, the College of Agriculture and Environmental Sciences and the College of Engineering. On the national level, Dr. Pinkerton has served as Chair for the Environmental and Occupational Health (EOH) assembly and Chair of the Environmental Health Policy Committee for the American Thoracic Society. His community-based endeavors have been to chair and oversee the publication of a workshop on Climate Change and Global Public Health (Pinkerton et al, 2012, PATS). He currently serves as the Vice-Chair for the International Health Committee of the American Thoracic Society. He has been appointed to numerous scientific advisory boards for the U.S. Environmental Protection Agency, the National Institutes of Health, the National Research Council and most recently the International Agency for Research on Cancer (IARC) in Lyon, France. He sits on editorial boards for Inhalation Toxicology and the Journal of Toxicology and Environmental Health. He is a reviewer for numerous scientific journals. His research on the perinatal effects of environmental air pollutants on lung growth and development, maturation and aging is found in numerous scientific publications, reports and chapters. Trained as a research pathologist at Duke University Medical Center, he has trained more than 40 graduate students over his career. He has edited and co-authored books on climate change (Global Climate Change and Public Health, 2014), lung development and the environment (The Lung: Development, Aging and the Environment, 2nd Edition, 2015) lung aging (Molecular Aspects of Aging: Understanding Lung Aging, 2014), and comparative respiratory systems (Comparative Biology of the Normal Lung, 2nd Edition, 2015). Dr. Pinkerton's primary sources of research funding for the past five years has been supported by grants from and contracts with both government agencies and private companies, with core research support primarily being from the federal government (NIEHS), with additional grant support from Universities and foundations such as the Tobacco-Related Disease Research Program and the American Asthma Foundation.

Puls, Robert

Robert Puls Environmental Consulting

Dr. Robert Puls is owner and principal scientist of Robert Puls Environmental Consulting, LLC. His company has received funding from the National Ground Water Association, the Ground Water Protection Council, the Environmental Defense Fund, and the Wyoming Outdoor Council for projects related to water quality monitoring, aquifer drinking water exemptions, risk assessment and management, and protection of water resources during oil and gas exploration and production. He currently serves on an Advisory Board for Duke Energy regarding coal ash management. Dr. Puls recently retired as Director of the Oklahoma Water Survey and Associate Professor in the College of Atmospheric and Geographic Sciences at the University of Oklahoma. As Director, his research interests included ground water protection from nonpoint sources, water resource protection related to oil and gas operations, wastewater reuse strategies, assessment of ecological impacts from climate change, and aquifer storage and recovery as a means to conserve water and augment drinking water supplies. He received funding in 2014-2015 from the National Science Foundation. He received his Ph.D. in Soil and Water Science from the University of Arizona. Dr. Puls received his Master's in Forest Resources from the University of Washington and his B.S. in Soil Science and Natural Resources from the University of Wisconsin-Madison. Before coming to the University of Oklahoma, he worked for 25 years at the U.S. Environmental Protection Agency (EPA) Office of Research and Development in the Ground Water and Ecosystems Restoration Division in Ada, Oklahoma. He has held positions with EPA as Senior Soil Scientist, Branch Chief, and Director of Research of the Division. His research focused on passive systems to restore groundwater, contaminated site characterization and risk assessment, ground-water sampling, and the transport and fate of contaminants in the subsurface. He has served on Advisory Boards and Committees with the U.S. Geological Survey, EPA, U.S. Department of Energy, National Research Council, the Nature Conservancy, Ground Water Protection Council, ASTM, and private industry. Dr. Puls currently serves on the Editorial Board of the Land Contamination and Reclamation Journal and the journal, Water. Dr. Puls has authored / co-authored more than 150 research articles on the above topics and received a number of EPA interagency and industry awards for his research.

Snyder, Shane

University of Arizona

Dr. Shane Snyder is a Professor of Chemical & Environmental Engineering and holds joint appointments in the College of Agriculture and School of Public Health at the University of Arizona. He also co-directs the Arizona Laboratory for Emerging Contaminants (ALEC) and the Water & Energy Sustainable Technology (WEST) Center. For over 20 years, Dr. Snyder's research has focused on the identification, fate, and health relevance of emerging water pollutants. Dr. Snyder and his teams have published over 200 manuscripts and book chapters on emerging contaminant analysis, treatment, and toxicology (h-index = 68 with over 18,000 citations as of February 2018). He currently serves as an editor-in-chief for the international journal Chemosphere. Dr. Snyder has been invited to brief the Congress of the United States on three occasions on emerging issues in water quality. He is a Fellow of the International Water Association and a member of the World Health Organization's (WHO) Drinking Water Advisory Panel. He has served on several U.S. Environmental Protection Agency (EPA) expert panels. He was a member of the EPA Science Advisory Board Drinking Water Committee and is currently a member of the U.S. EPA's Board of Scientific Counselors Sustainable Water committee. He was a member of the U.S. National Academy of Science's National Research Council Committee on Water Reuse and currently serves on the WHO's guiding committee on development of potable reuse guidelines. Dr. Snyder has also worked in Singapore for nearly a decade, first as a Visiting Professor at the National University of Singapore (2011-2017) and currently as Professor at Nanyang Technological University where he also serves as the Executive Director of the Nanyang Environmental & Water Research Institute. In the past two years, Dr. Snyder has received research funding from: the Federal Emergency Management Agency, National Science Foundation, Water Research Foundation, Johnson and Johnson, Black & Veatch Holding Company sub WateReuse Research Foundation, METAWATER Co., Ltd. (Japan), CH2M Hill, and Agilent Technologies.

Theis, Thomas L.

University of Illinois at Chicago

Professor Thomas L. Theis is Director of the Institute for Environmental Science and Policy (IESP) at the University of Illinois at Chicago. IESP is a campus-level center dedicated to the development of interdisciplinary research initiatives related to environmental quality. His areas of expertise include life cycle assessment, industrial ecology, the mathematical modeling and systems analysis of environmental processes, environmental policy, pollution prevention, and hazardous waste management. He has published in excess of 130 peer-reviewed articles and is the co-author (with Jonathan Tomkin) of the text Sustainability: A Comprehensive Foundation. He was co-chair (with James Galloway and Otto Doering) of the Integrated Nitrogen Committee of the USEPA SAB. Their final report: Reactive Nitrogen in the United States: An Analysis of Inputs, Flows, Consequences, and Management Options was released in 2011. Dr. Theis is a past member of the U.S. EPA Congressionally Chartered Science Advisory Board, and is past editor of the Journal of Environmental Engineering. From 1980-1985 he was the co-director of the Industrial Waste Elimination Research Center (a collaboration of Illinois Institute of Technology and University of Notre Dame), one of the first Centers of Excellence established by the U.S. EPA. In 1989 he was an invited participant on the United Nations' Scientific Committee on Problems in the Environment (SCOPE) Workshop on Groundwater Contamination, in 1998 he was invited to by the World Bank to assist in the development of the first environmental engineering program in Argentina, in January, 2009 he delivered the keynote address at the NitroEurope Conference in Gothenburg, Sweden, and in October 2009 he was a member of the U.S. delegation to the US-Japan Workshop on Life Cycle Assessment and Infrastructure Materials in Sapporo, Japan. He is the founding Principal Investigator of the Environmental Manufacturing Management Program.

Turner, Jay

Washington University

Dr. Jay Turner is a Professor of Energy, Environmental and Chemical Engineering, and Vice Dean for Education in the School of Engineering & Applied Science at Washington University in St. Louis. Dr. Turner holds B.S. and M.S. degrees from UCLA (1987) and a D.Sc. from Washington University (1993), all in Chemical Engineering. Following his M.S. studies, he spent two years at the University of Duisburg, Germany, where he was a DAAD Fellow. Following his D.Sc. studies, Dr. Turner spent eight months on assignment with the Federal Highway Administration, U.S. Department of Transportation (FHWA/DOT), as an Air Quality Specialist. He subsequently joined the Washington University faculty in 1994 as an Assistant Professor of Engineering & Policy. He has taken sabbaticals with the Crocker Nuclear Laboratory at the University of California-Davis, Sonoma Technology Inc., and the Harvard T.H. Chan School of Public Health. Dr. Turner's research primarily focuses on air quality characterization with emphasis on field measurements and data analysis to support a variety of applications in the atmospheric science, regulation and policy, exposure assessment, and health studies arenas. He was the Principal Investigator of the St. Louis – Midwest Fine Particulate Matter Supersite. Dr. Turner is currently Co-PI for three NIH-funded projects to examine relationships between air pollution and neurodegenerative disease, conduct passive and mobile platform measurements to assess the air quality impacts of a neighborhood-scale greening intervention, and to develop and deploy a high time resolution monitor for mobile mapping of VOC compounds. He is currently PI for a FHWA/DOT-funded project to quantify the efficacy of an engineered vegetative buffer to attenuate near-road air pollution. Current and recent consulting activities include development of a conceptual model for particulate matter air quality over the Pearl River Delta (funded by the Hong Kong Environmental Protection Department through Hong Kong University of Science and Technology) and assessment of ozone sensitivities for Detroit (funded by the Southeast Michigan Council of Governments). Dr. Turner has served on several state and local air quality-related advisory committees and the Science and Technical Support Workgroup of the Federal Advisory Committee Act (FACA) Subcommittee for Ozone, Particulate Matter, and Regional Haze Implementation Programs. He serves on EPA's chartered Science Advisory Board (SAB) and chaired the SAB panel for Screening Methodologies to Support Risk and Technology Reviews (RTR): A Case Study Analysis (2017-2018). Dr. Turner previously served on the Ambient Monitoring and Methods Subcommittee (AMMS) of EPA's Clean Air Scientific Advisory Committee (CASAC), the Independent Technical Advisory Committee of the Texas Air Quality Research Program, and the Health Effects Institute project panel for the National Particle Components Toxicity Initiative. Dr. Turner was general chair for the 2007 Annual Conference of the American Association for Aerosol Research (AAAR) and is a past president of AAAR. From 2012 to 2017 he served on the SAB's Science and Technology Achievement Awards (STAA) Committee and chaired the committee in 2016-2017.

White, Kimberly

American Chemistry Council

Dr. Kimberly Wise White is a Senior Director in the Chemical Products and Technology Division at the American Chemistry Council. In this position she works with multiple stakeholders to conduct scientific research that informs human health hazard assessments and implement approaches to improve the chemical risk assessment process. Dr. White received a B.S. and M.S. in Biology and a Ph.D. in Environmental Toxicology from Texas Southern University. She is a member of the Society of Toxicology and serves on the Board of Directors for the Toxicology Forum. Dr. White has a diverse background having worked as a laboratory researcher focusing on neurotoxicity, an environmental sustainability and compliance manager and as a scientific advisor. For the past 10 years, she has been actively involved in supporting scientific research and chemical risk assessments that are firmly based on up-to-date scientific knowledge and are evaluated in accordance with the most relevant scientific approaches. Dr. White has also coauthored publications on adverse outcome pathways, weight of evidence frameworks, problem formulation in chemical assessment and understanding potency information associated with human exposures.